

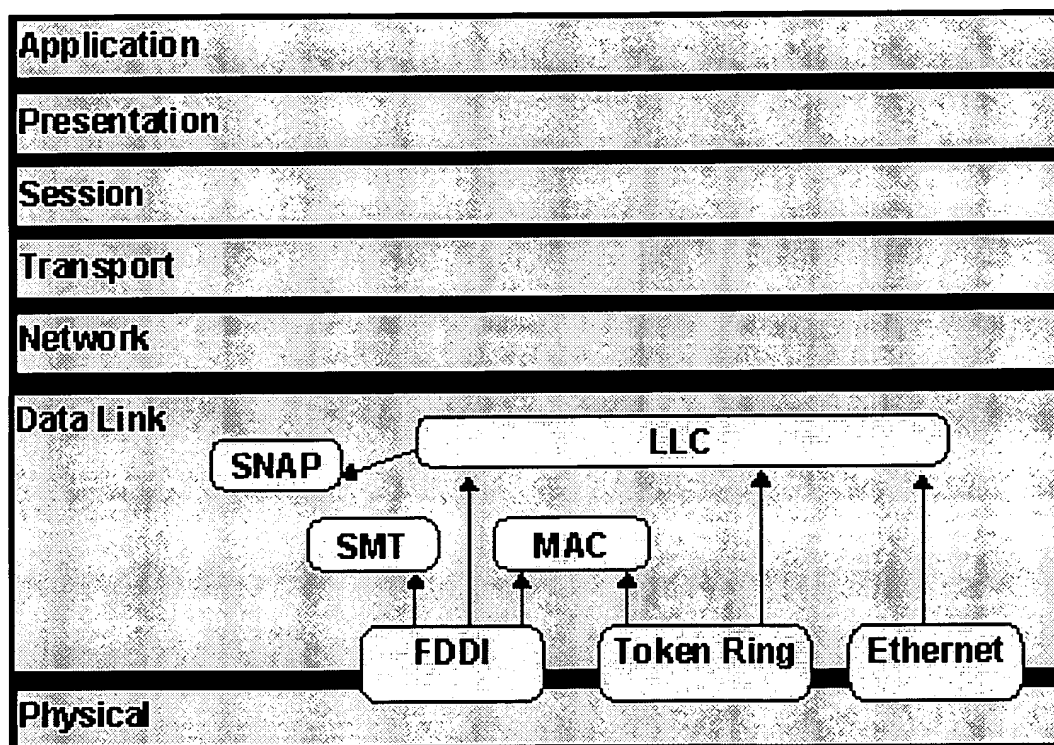
REMARKS

Claims 1-15 are pending in this application. Claims 1-15 stand rejected. In light of the remarks set forth below, Applicant respectfully submits that each of the pending claims is in immediate condition for allowance.

Paragraphs 3-6 address the arguments previously submitted by Applicant. Applicant will address the Examiner's remarks. In paragraph 4 of the Office Action, the Examiner asserts that U.S. Patent No. 6,631,122 ("Arunachalam") discloses a quality of services (QoS) agent which is located at the network layer. The Examiner asserts there is no clarification for a functional host layer and the QoS device in Arunachalam is equivalent to the claimed service broker device. However, this is incorrect. Applicant asserts that one skilled in the art would understand the functional host layer would be understood to correspond to the Session Layer, which describes the organization of data sequences larger than the packets handled by lower layers.

In Arunachalam, the QoS agent and QoS manager are actually a single device operating at the essentially the same functional layer. The QoS agent of Arunachalam performs mapping of a Type-of-Service and Digital Signal (ToS/DS) field based on a service level agreement (SLA) with a Peer QoS agent or a subscriber. Thus, the QoS Agent of Arunachalam operates on the network layer. As shown in Figure 10A, the agent layer 1007 and wireless QoS agent 1011 are linked. As such, the Agent and QoS agent appear to correspond to the network layer as shown in a typical layer designation diagram reproduced below. Therefore, the QoS device fails to be located at the functional host layer as is the service broker device recited in Applicant's claim. Therefore, with regard to paragraph 4, Applicant respectfully submits that this argument has been overcome.

In contrast, the present invention realizes a service level (i.e., the claimed service agreement) among domains which are managed by different providers such as Internet Service Providers (ISPs) (i.e., the claimed operations management networks of the plurality of providers) by using a multi-domain service broker (i.e., the claimed service broker device). Thus, the present invention assures the service level on the session layer, which is a higher layer than that of the ToS/DS field.



Paragraph 5 of the Office Action addresses Applicant's argument that Arunachalam fails to disclose logic in which a service broker device of a domain decides whether a subject for executing a subsequent process is an external or internal system. The Office Action asserts that, as shown in Figure 7 of Arunachalam, the QoS agent is connected to, and communicates with, internal and external systems. As such, the QoS device must decide whether or not to communicate with the internal system or external

system. However, Applicant respectfully disagrees that the QoS device decides whether a subject for executing a subsequent process is an external or internal system.

In Arunachalam, there is no means for deciding whether a subject for executing a subsequent process is an external or internal system. As discussed Arunachalam, a QoS mapping function extracts the TOS byte of the IP header as well as the source address field. The QoS desired by the IP packet is indicated by the TOS byte. This data is then sent to the QoS agent, which examines the TOS and destination byte to determine a class of service. A logic flow-tag is then assigned which helps the flow to its allocated resource entity. However, the QoS device does not decide whether or not to communicate with internal or external systems. The QoS agent merely bases the path on the service level agreement to match required QoS between two networks. Therefore, Arunachalam fails to disclose the logic in which a service broker device of a domain decides whether a subject for executing subsequent process is an external or an internal system.

Finally, Applicant asserted that Arunachalam fails to disclose a function of brokering domains. The Office Action asserts that the QoS is capable of providing bandwidth brokering functions such as intra-domain and inter-domain service level negotiation and brokering. Arunachalam's QoS agent maps incoming and outgoing traffic according to a service level agreement between the service classes of two networks. This is different than the recited function of brokering domains. Therefore, Applicant respectfully submits that Arunachalam fails to disclose a function of brokering domains.

Claims 1, 2, 10, and 12-15 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,631,122 ("Arunachalam"). Applicant respectfully requests reconsideration and withdrawal of this rejection.

To anticipate a claim under 35 U.S.C. § 102, the cited reference must disclose every element of the claim, as arranged in the claim, and in sufficient detail to enable one skilled in the art to make and use the anticipated subject matter. See, PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1566 (Fed. Cir. 1996); C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1349 (Fed. Cir. 1998). A reference that does not expressly disclose all of the elements of a claimed invention cannot anticipate unless all of the undisclosed elements are inherently present in the reference. See, Continental Can Co. USA v. Monsanto Co., 942 F.2d 1264, 1268 (Fed. Cir. 1991).

As discussed above, among the limitations of Applicant's independent claims not present in Arunachalam is a service broker device of the functional host layer of said network service management device restoring information on the operations management networks managed by the respective providers.

Arunachalam discloses a QoS agent and QoS manager. The QoS agent is interlinked with the QoS manager. In fact, Arunachalam teaches that the QoS agent and QoS manager are interchangeable and merged in a single unit. Additionally, the QoS agent, as disclosed in Arunachalam, fails to act as a service broker device at the functional host layer of said network service management as explicitly recited in Applicant's claim. The QoS agent acts on the network layer not the Session Layer, which corresponds to the functional host layer. As such, Applicant respectfully requests reconsideration and withdrawal of this rejection.

Claims 3 and 5-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Arunachalam.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or combine

references to arrive at the claimed subject matter. The prior art references must also teach or suggest all the limitations of the claim in question. See, M.P.E.P. § 706.02(j). A reference can only be used for what it clearly discloses or suggests. See, In re Hummer, 113 U.S.P.Q. 66 (C.C.P.A. 1957); In re Stencel, 4 U.S.P.Q.2d 1071, 1073 (Fed. Cir. 1987). Here, the references, whether taken individually or in combination, do not disclose or suggest the invention claimed by the Applicant.

Claims 5 and 6 include logic in which a service broker device of a domain decides whether a subject for executing a subsequent process is in an external system or an internal system in order to provide a quality assured service compatible with a multi-domain network.

However, Arunachalam fails to disclose or suggest such logic. In Arunachalam, the use an internal or external system is based solely on the packet routing. Thus, there is no decision regarding executing a process on an internal or external system. Further, any interdomain activity is based on any existing service level agreement. Therefore, Arunachalam does not render Claims 5 and 6 obvious.

As discussed above, Arunachalam fails to disclose Applicant's explicitly recited service broker device at the functional host layer. As such, Applicant respectfully requests reconsideration and withdrawal of the rejection.

Claims 4 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Arunachalam in view of other pieces of art, namely, U.S. Patent No. 6,330,586 ("Yates"), U.S. Patent No. 6,516,350 ("Lumelsky"), or U.S. Patent No. 6,594,700 ("Graham"). Applicant respectfully requests reconsideration and withdrawal of these rejections.

The additional references were not included to teach the explicitly recited service broker device at the functional host layer of said network service to but teach additional limitations which, even if it were to show, do not cure the deficiencies in Arunachalam discussed above. As such, Applicant respectfully requests reconsideration and withdrawal of the rejection.

Claims 8 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Arunachalam in view of U.S. Patent no. 6,594,700 ("Graham"). Applicant respectfully requests reconsideration and withdrawal of this rejection.

Claims 8 and 9 are directed to the method of providing a quality assured service compatible with a multi-domain network which includes a service broker device for providing a broker function for a service agreement among operations management networks of the respective providers. Arunachalam fails to disclose or suggest a function of brokering domains.

Graham merely discloses brokering requests and responses of many different protocols to provide a plug and play function of the protocols (e.g., column 2, lines 22 to 27). Graham fails to disclose or suggest the method of providing a quality assured service compatible with a multi-domain network. Therefore, the combination of Arunachalam and Graham does not disclose the claimed invention as recited in Claims 8 and 9 obvious.

Further, the arguments with respect to Claims 1 and 10 are equally applicable to Claims 8 and 9. Graham is merely cited in relation to the service registration step recited in Claim 8. Like Arunachalam, Graham fails to disclose or suggest the service broker device of the functional host layer of the network service management device storing information on the operations management networks managed by the respective

Application No.: 09/818,955

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providers. Therefore, a combination of Arunachalam and Graham does not render the invention as recited in Claims 8 and 9 obvious.

Applicant has responded to all of the rejections and objections recited in the Office Action. Reconsideration and a Notice of Allowance for all of the pending claims are therefore respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If the Examiner believes an interview would be of assistance, the Examiner is welcome to contact the undersigned at the number listed below.

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Respectfully submitted,

By

Ian R. Blum

Registration No.: 42,336

DICKSTEIN SHAPIRO MORIN & OSHINSKY
LLP

1177 Avenue of the Americas
New York, New York 10036-2714
(212) 835-1400
Attorney for Applicant

IRB/mgs